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FROM ELIGIBILITY DETERMINATION AND BENEFITS PAYMENT  
TO SELF-SUFFICIENCY

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# Transitioning ACES to an Open and Flexible Environment

*A Transition Plan  
for a Changing Environment*

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Report of the ACES Transition Planning Work Group  
January 1995

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January 5, 1995

Nita Rinehart, Chair, Senate Ways and Means Committee  
Jean Silver, Chair, House Appropriations Committee  
Ruta Fanning, Director, Office of Financial Management  
Olympia, Washington 98504

Dear Colleagues:

The Legislative Evaluation and Accountability Program Committee is pleased to present you with the report of the ACES Transition Planning Work Group. In March 1994 the Legislature called for a plan to transition ACES to a more flexible architecture or open computer system. This report answers that call.

In July a Work Group was formed to provide leadership and industry expertise in planning the transition of ACES. This report is the result of hard work and cooperation among many people who believe welfare services will change substantially in the future, and that Washington's information systems can quickly respond to these changes if certain actions are taken now.

This report represents a key milestone for more adaptive information systems across the state. Upon your acceptance of it, the transition will begin immediately. We look forward to discussing this report with you.

Sincerely,

Bob Fitchitt, Administrator  
Legislative Evaluation and Accountability Program Committee  
Chair, ACES Transition Planning Work Group

# Transitioning ACES to an Open and Flexible Environment

A Transition Plan  
for  
a Changing Environment

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# ACKNOWLEDGMENTS

The state recognized that the transition of the Automated Client Eligibility System (ACES) to a more modern technical environment cannot be made in isolation. Consequently, the Legislature called for a partnership between agencies, and with the private sector, to develop a vision for future information systems. Over the past five months, a diverse group of industry practitioners gathered on a regular basis to craft this vision and work on a plan to get there. The participants were generous with their time and support. This report is the result of the insight and hard work of these participants.

## ✓ **Department of Social and Health Services**

Office of the Secretary  
Economic Services  
Community Services Offices  
The ACES Project  
Information System Services Division  
Management Services

## ✓ **Other Public Sector Contributors**

Department of Information Services  
Office of Financial Management  
Senate Ways and Means Committee  
House Appropriations Committee  
Legislative Service Center  
Legislative Evaluation and Accountability Program Committee

## ✓ **Private Sector Contributors**

Boeing Computer Services  
SeaFirst Bank  
Washington Software Association  
SOLUTIONS Consulting Group  
FRAMEWORK  
Public Knowledge

# TABLE OF CONTENTS

<b>ACKNOWLEDGMENTS.....</b>	<b>iii</b>
<b>TABLE OF CONTENTS .....</b>	<b>v</b>
<b>EXECUTIVE SUMMARY .....</b>	<b>vii</b>
<b>INTRODUCTION.....</b>	<b>1</b>
Background.....	1
Impetus for Change.....	1
Work Group Composition and Operations.....	2
Methodology.....	2
Approach for Developing the Transition Plan.....	3
Approach for Implementing the Transition Plan.....	4
<b>THE CURRENT ENVIRONMENT.....</b>	<b>5</b>
Business Functions.....	5
ACES Architecture .....	7
<b>THE FUTURE MODEL .....</b>	<b>9</b>
The Business Vision.....	9
The Technology Vision.....	11
Working Together.....	14
<b>ACTION PLAN .....</b>	<b>17</b>
Model Business Policy.....	18
Establish Development and Architectural Guidelines.....	18
Provide Common Data Access.....	19
Transition ACES Functionality.....	20
Develop Client/Provider Services Management Capability.....	21
Transition Time Line.....	21
Other Enhancement Projects.....	22
<b>COSTS AND BENEFITS.....</b>	<b>23</b>
Phase 1: Estimated 1995–1997 Biennium Cost Totals.....	23
Phase 2: Estimated 1997–2001 Biennia Cost Totals.....	24
Expected Benefits.....	25
<b>TRANSITION MANAGEMENT.....</b>	<b>27</b>
Management Infrastructure.....	27
Important Considerations.....	30
Transition Challenges.....	31
<b>CONCLUSIONS AND RECOMMENDATIONS.....</b>	<b>35</b>

# EXECUTIVE SUMMARY

Recognizing that information system architecture should not be an impediment to rapid implementation of state and national welfare reform initiatives, the 1994 Legislature included a proviso in the Supplemental Budget (ESSB 6244) calling for a combination public and private sector Work Group to develop a plan to transition the Automated Client Eligibility System (ACES) to a more flexible and open architecture.

This report, developed between July and December 1994, presents the Work Group's prescribed plan for transitioning ACES to the desired architecture.

## GOAL

**“... plan the transition of ACES to a more flexible architecture or open computer system.”**

*Proviso to Engrossed Substitute Senate Bill 6244*

## WHY CHANGE

**The welfare environment is undergoing rapid change**

- The focus in welfare programs is changing from client eligibility determination to client self-sufficiency. However, ACES emphasizes eligibility determination and benefits payment, not self-sufficiency.
- Welfare workers do not have access to needed data and tools.
- Computer systems must rapidly accommodate new and changing welfare policies.
- An open and flexible architecture is needed for a responsive system.

## HOW

**Follow a highly interdependent five-point plan**

- *Model Business Policy* - Will develop a model of Economic Services' processes and data so that the impact of policy change on its information systems can be quickly assessed. The end-product of this effort will be a high-level business policy model. It will also include a prototype applying sample policy changes to the model.

- *Establish Development and Architectural Guidelines* - Will establish practical guidelines and standards for procuring, developing, managing, and supporting products and services that follow the state's future technology model. The end-product will be a baseline set of guidelines related to future systems projects.
- *Provide Common Data Access* - Will build a warehouse of data, from both internal and external sources, and provide reporting tools to rapidly access information needed to support clients' self-sufficiency. The end-product will be a common data warehouse pilot application.
- *Transition ACES Functionality* - Will reengineer the ACES design into modular software components and transition it to the future technology architecture, following a rational sequence of steps. The end-product will be a transition specification emphasizing a phased, incremental approach in making the actual transition during the subsequent two biennia (1997–99 and 1999–2001).
- *Develop Client/Provider Services Management Capability* - Will support service planning, assessment, monitoring, and measurement of outcomes. Will integrate employment information and monitoring with assessment of various service providers to support self-sufficiency counseling. The end-product of this effort will be a client services management system specification and prototype.

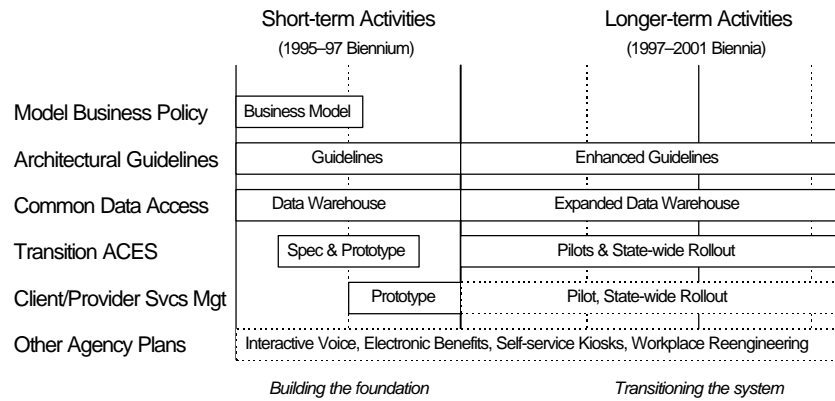
These five tracks represent the essential work required for the transition. Additionally, the Department of Social and Health Services (DSHS) is proposing other projects that will help support the focus on self-sufficiency (for example, interactive voice, electronic benefits, self-service kiosks, and workplace re-engineering). The ACES transition should be coordinated with these projects.

## TIMING

### Two-Phase Incremental Approach Covering Three Biennia

**Phase 1: 1995–1997 Biennium** - Test the open and flexible future architecture and build a foundation for the substantial investment to complete the transition.

**Phase 2: 1997–1999 and 1999–2001 Biennia** - Focus on the actual transition of ACES to the new environment.



## COST

### Estimated Budget to Carry Out the Plan

**Phase 1 - \$1.6 million** of state funds. Total estimated cost is \$3.0 million (assumes 48% federal participation).

**Phase 2 - \$5.6 million to \$11.7 million** of state funds. Total estimated cost ranges from \$10.8 million to \$22.5 million (assumes 48% federal participation).

These cost ranges for the second phase represent only “order of magnitude” estimates at this point. More refined estimates will be possible as work proceeds over the course of the 1995–1997 biennium.

## LONG-TERM BENEFITS

### Reduce Caseloads and Lower Funding Levels

In Washington State, grants to Economic Services clients are projected to grow by \$108 million next biennium; medical assistance payments (primarily to ES clients) are projected to grow by \$330 million.

The key strategy for reducing welfare caseloads and funding levels is self-sufficiency.

A flexible and responsive computer system is essential to support self-sufficiency.



## TRANSITION TEAM

## RISKS

### An Enabling Environment

Changes to practices can occur much more easily with a flexible system.

Changes to policy can occur much more quickly with an adaptive system.

Improved service to clients can occur with an open system.

Ongoing maintenance and enhancement costs are reduced with a flexible, adaptive, and open architecture.

The transition must continue as a collaborative effort, involving program, technical, and managerial expertise.

**The State** will supply qualified steering committee members, project managers, analysts, and program representatives.

**External Vendors** must supply qualified project managers, technical analysts, and database designers. Independent oversight (quality assurance) must also be provided by an outside source.

**Voluntary Advisors** from the private sector and other public sector agencies have lent valuable insight to the transition planning project. Continued participation from a complement of people through the transition is envisioned.

**Schedule Delay** - Moving to an open, flexible (that is, rapid-response) environment requires that significant challenges be met successfully. Employees must buy in to the objectives and obtain necessary orientation and skill sets. Executive sponsorship and management commitment must be sufficient to overcome difficult problems that will surface during the project. Procedures for contracting with vendors and for acquiring project resources must be expedited. The risk, if these challenges are not met, is schedule delay.

**Scope Creep** - By design, this project will develop new skills, reveal many opportunities for improvement, and generally foster enthusiasm. However, this enthusiasm typically makes people want more than originally planned. This project is designed to produce *essential results, in manageable increments*; it does not contain a reserve for enhancements beyond the original scope.

## STARTING POINT

- ✓ **Adopt** the transition plan.
- ✓ **Approve** funding for the 1995-1997 biennium.
- ✓ **Institute** a strong management infrastructure.
- ✓ **Develop** detailed operational plans for each track.

# INTRODUCTION

## BACKGROUND

National and state welfare reform initiatives will cause welfare policy and programs to be very different in the future than they have been in the past. Information systems must be able to accommodate these potentially sweeping changes with very little notice

- **At the national level** - The specific change stemming from the national reform initiatives is still uncertain. However, most people expect the change to be substantial. This means that the basic architecture of the Automated Client Eligibility System (ACES) must be sufficiently *open* to rapidly address a variety of policy changes.
- **At the state level** - The State of Washington intends to transition the focus of its welfare program from eligibility determination and benefits payment to self-sufficiency. This means that the architecture of ACES must be sufficiently *flexible* to quickly provide additional capabilities in the future.

Recognizing that the information system architecture should not be an impediment to the rapid implementation of state and national welfare reform initiatives, the 1994 Legislature included a proviso in the Supplemental Budget (ESSB 6244) calling for the formation of a combination public and private sector Work Group to develop a plan to transition ACES to a more flexible and open architecture. This report, developed between July and December 1994, presents the Work Group's prescribed plan for transitioning ACES to the desired architecture.

Prior to, during, and subsequent to the development of this report and the transition plan, the Department of Social and Health Services (DSHS) has been in the process of customizing and implementing an ACES transfer system from the State of Connecticut. The Connecticut system is being adapted to Washington's welfare policies and procedures and is expected to be implemented by FY 97. The transition plan presented in this report is intended not to hinder the implementation of the Connecticut system, but rather to complement that effort.

## IMPETUS FOR CHANGE

Where is the impetus for changing the ACES architecture coming from, particularly when a new ACES is being implemented? First, the ACES Connecticut system now being adapted in Washington focuses on welfare eligibility determination and benefit payment. Although these capabilities are essential to the success of the state's welfare program, they will not address state and national initiatives and reforms promoting self-sufficiency. Second, this new ACES will not provide instant access to data and tools required to

support decision making by welfare support staff and management. Third, although the new ACES will vastly improve the eligibility determination process, it is not architected so as to sustain the high rate of policy and procedural changes expected in the latter part of this century and the next century.

## **WORK GROUP COMPOSITION AND OPERATIONS**

The Work Group formed to develop the transition plan comprised highly qualified industry practitioners from both the public and private sectors. They brought specialized technical, program, and management expertise to the Work Group. The following organizations were represented:

- ✓ Department of Social and Health Services (DSHS)
- ✓ Department of Information Services (DIS)
- ✓ Office of Financial Management (OFM)
- ✓ Senate Ways and Means Committee
- ✓ House Appropriations Committee
- ✓ Legislative Service Center (LSC)
- ✓ Legislative Evaluation and Accountability Program Committee (LEAP)
- ✓ Boeing Computer Services
- ✓ SeaFirst Bank
- ✓ Washington Software Association

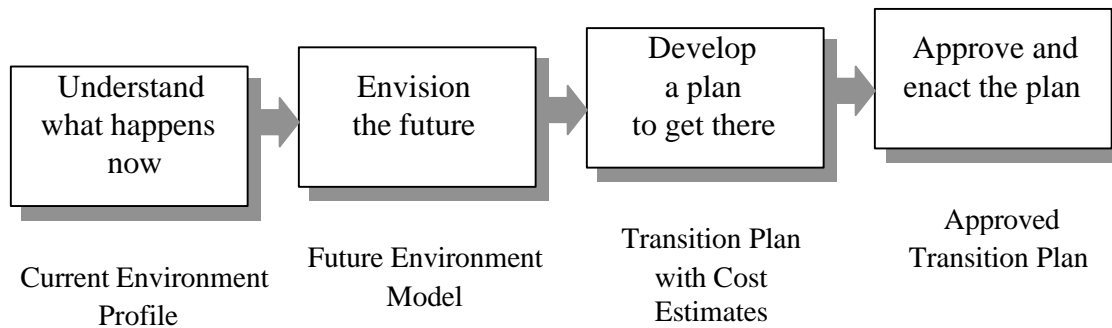
After its formation, the Work Group selected SOLUTIONS Consulting Group to facilitate day-to-day project activities. SOLUTIONS was selected because of its welfare, technical, and management experience. FRAMEWORK and Public Knowledge assisted in the effort as subcontractors to SOLUTIONS

The Work Group met biweekly throughout the project to review and take action on its progress. The Work Group also participated in the planning sessions addressed in the "Methodology" section below.

Overall project coordination of Work Group activities was provided by the LEAP Administrator, under the auspices of the LEAP Committee.

## **METHODOLOGY**

The Work Group identified four key steps for developing the transition plan. These steps are depicted in the graph found on the next page.



The first step enabled the Work Group to gain a fundamental understanding of the current business and technical environments, and to develop profiles of both.

The second step emphasized anticipated welfare changes resulting from state and national initiatives. It also included an assessment of business functions not currently being addressed by automation. Lastly, it included an analysis of the kind of information system architecture that would be required to support an accelerated rate of policy and procedural changes as well as to support new and existing business functions. Models of the future business and technical environments resulted from the activities undertaken in this step.

The third step resulted in the plan presented in this report, which includes a specific set of projects and costs for migrating ACES to an open and flexible architecture.

The fourth step calls for the approval to proceed with the plan.

Most of the information gathering for developing the transition plan occurred in joint planning sessions involving a mix of Work Group representatives, and DSHS line, management, and information systems staff. These sessions took several forms, including roundtable sessions, focus group sessions, brainstorming sessions, and what-if sessions. This collaborative approach allowed management, program, and information systems staff with differing interests and perspectives to significantly influence the future technology strategy. It also raised the level of agency enthusiasm, commitment, and sense of ownership of the transition plan.

## **APPROACH FOR DEVELOPING THE TRANSITION PLAN**

The Work Group identified and evaluated potential transition plan activities and projects early in the project. This groundwork enabled the Work Group to identify clearly the scope of the transition plan to be developed. As a result, the Work Group developed the following three criteria for determining what activities should be included in the transition plan for the 1995–1997 time period:

- *They should test the components of the open and flexible architectural model*  
Components include not only the obvious ones of hardware and software, but also

the shift in the department's skill base and support infrastructure required to implement and maintain the architecture.

- *They should support known business needs.* General directions anticipated to result from welfare reform are more important here than specific policies.
- *They should complement ongoing ACES development and implementation efforts.* This means minimizing the demands on both technical and program staff during ACES development implementation, and seeking activities that could benefit from or add value to concurrent ACES development efforts.

## **APPROACH FOR IMPLEMENTING THE TRANSITION PLAN**

The development and implementation described in the transition plan rely heavily on an incremental, phased approach featuring a series of shorter-duration projects, each with measurable outcomes that will prove or disprove particular transition strategies. This approach emphasizes early use of *proof-of-concept* prototypes and pilots. It is intended to deliver concrete, measurable results that can be gauged for effectiveness before large sums of money have been committed. Consequently, pilot projects and prototyping methods are important aspects of the plan. The incremental approach has been deliberately chosen as opposed to the “grand design” approach, which has failed so spectacularly on many past government automation projects.

# THE CURRENT ENVIRONMENT

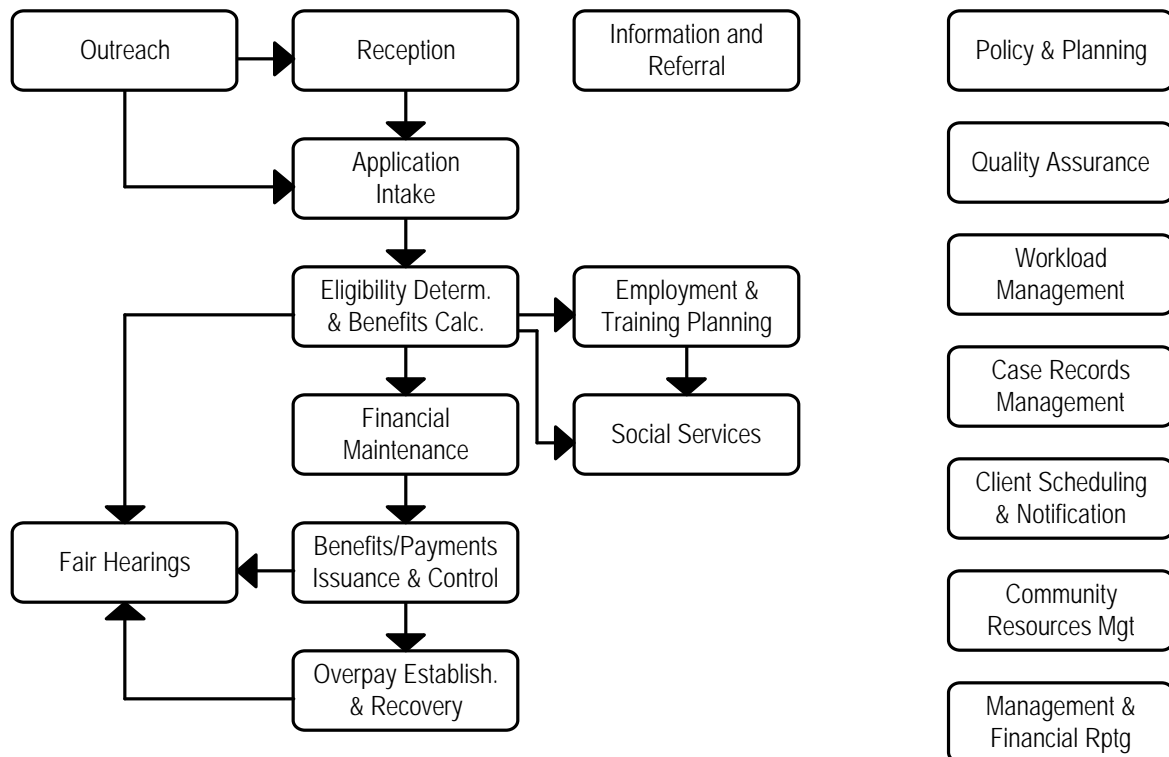
This section summarizes the current business and technical environments of the Washington welfare system.

The Work Group's early efforts focused on gaining an understanding of the present-day environment to serve as a frame of reference for planning the transition to a desired future. The Work Group documented primary business functions and processes essential to the delivery of welfare services. The Work Group also reviewed the systems comprising the current welfare services delivery environment. For purposes of this planning process, "current environment" was assumed to mean the work process and technical environments that will be in place once the system from Connecticut has been fully implemented.

## BUSINESS FUNCTIONS

The chart below illustrates basic welfare process flows. Primary business functions currently carried out in delivering welfare services are then briefly described.

### Functional Welfare Relationships



Primary welfare functional areas include:

- *Outreach* - Identify and inform people who may be eligible for programs and services.
- *Reception* - Assist and direct clients and prospective clients visiting the agency.
- *Information and Referral* - Inform people about available non-Community Services Office services.
- *Application Intake* - Collect information necessary to register an applicant and determine applicant's emergent needs and requirements for expedited services.
- *Eligibility Determination and Benefits Calculation* - Collect information necessary to determine eligibility and to calculate benefits.
- *Financial Maintenance* - Collect information necessary to review and determine continuing eligibility for services.
- *Benefits/Payments Issuance and Control* - Issue, reissue, cancel, re-direct, and inventory warrants, medical cards, and food coupons. Pay vendors.
- *Employment and Training Planning* - Determine the employability status of clients and plan for services to encourage self-sufficiency through employment.
- *Social Services* - Provide or refer clients to services that are related to their needs.
- *Client Notification and Scheduling* - Generate notices to client regarding actions taken or information needed and schedule client appointments.
- *Workload Management* - Manage the assignment of cases and track critical application and case events.
- *Case Records Management* - Manage all aspects of the physical case file and its records.
- *Overpayments Establishment and Recovery* - Identify and recover any benefits overpaid to clients.
- *Fair Hearings* - Provide clients with an opportunity to contest eligibility determinations, changes in benefits, or overpayments recovery.
- *Quality Assurance* - Identify errors or potential errors in processing or in determining benefits, and develop corrective actions.



- *Policy and Planning* - Develop, modify, and implement agency policy and procedures.
- *Community Resources Management* - Identify services and resources, develop community-based provider relationships, and monitor referrals for services.
- *Management and Financial Reporting* - Generate management and financial reports.

## ACES ARCHITECTURE

ACES supports a *centralized data architecture*. All data associated with the system reside and are managed at the ACES central computing facility. The IBM IMS/ESA hierarchical database management system is used for storage, retrieval, and management of data. The ACES software architecture follows a *centralized processing architecture*. That is, all application processing occurs on the ACES central computing facility mainframe. The ACES application itself is written in 370/COBOL utilizing CICS transaction processing.

The primary hardware platform is an IBM ES/9000 Model 640 mainframe located at the DIS computing center. The ES/9000 provides a hardware base for large on-line applications. Other devices utilized with the ES/9000 include high-speed impact printers, page printers, magnetic tape backup units, and an IBM 3745 communications controller for interface to the ACES telecommunications network.

At the Community Service Offices (CSO), each computing station is a diskless 486 personal computer (PC) acting as a 3270 (dumb terminal) on the ACES telecommunications network. These PCs are connected to a token ring local area network based on Novell Netware 3.11. The server for the local area network acts as a gateway for communications to the ES/9000.

It should be noted that the ACES hardware architecture is congruent with a distributed, cooperative, or client/server model. Many of its components could be utilized in building future applications.

Both the business processes and the ACES architecture depicted above must change dramatically to support the intended change in welfare focus from eligibility determination to self-sufficiency.

## THE FUTURE MODEL

This section describes the Work Group’s vision of the future from both business and technological perspectives.

The need to support self-sufficiency and the opportunities made possible by modern information technology come together in the model for the future. The result is an open and flexible environment, wherein policies can be rapidly adapted to changing societal needs, without the information systems becoming an impediment.

To achieve this balance and flexibility, the Work Group simultaneously considered the future business vision and the future technology vision. The interdependence of the two visions became increasingly apparent as the view of the future emerged.

### THE BUSINESS VISION

The Governor and Legislature of the State of Washington have clearly defined a changing role for public welfare. HB 2798 specifies that “income and employment assistance programs must emphasize the temporary nature of welfare and set goals of responsibility, work, and independence.” HB 1197 and HB 2798 require that DSHS reallocate its resources from support of an income maintenance system to support of an employment support system.

Economic Services is currently developing the Employment and Family Support Initiative. This initiative builds on the goals and principles articulated in HB 1197 and HB 2798, and proposes subsequent steps for Washington to take in support of economic self-sufficiency and reduction of poverty. The table below presents highlights from ES’ initiative and describes implications for programs and processes.

The business vision . . .	and what it means
<b>1. Welfare to Work</b> <i>If we want and expect people to succeed at work, the welfare system must become an employment support system.</i>	<ul style="list-style-type: none"><li>• Clients will be able to explore the impact of employment on their overall well-being. Workers and clients will develop “what if” scenarios, so that the clients can understand how health care benefits, the Earned Income Credit, and other non-assistance benefits will supplement wage earnings.</li><li>• Reporting procedures for working recipients will be simplified to remove paperwork burdens associated with taking a job.</li><li>• Clients will receive information about child care services, referrals, and payment authorizations through local agencies.</li></ul>

The business vision . . .	and what it means
	<ul style="list-style-type: none"> <li>• Services to employed individuals will be provided for 12 months to improve job retention and help workers to succeed.</li> <li>• Administrative loopholes causing overpayments when a client goes to work will be eliminated.</li> <li>• Better access to quality child care will be supported.</li> </ul>
<p><b>2. Connect with Business and Economic Development</b></p> <p><i>A program with the goal of employment must be closely connected with employers, local communities, and economic development efforts.</i></p>	<ul style="list-style-type: none"> <li>• Communities will play a much larger role in the delivery of welfare services. Linkages between the state’s public welfare system and community social and support services will be strengthened.</li> <li>• Contracts with service providers will be performance-based.</li> <li>• Employers will receive tax incentives to hire, train, and retain welfare recipients. The department will identify, market to, and support employers who elect to participate.</li> <li>• Communities will be responsible for planning for welfare-to-work programs and services that are relevant to their local areas. They will receive key data and plan monitoring tools from DSHS.</li> </ul>
<p><b>3. Support Mutual Responsibility</b></p> <p><i>Public assistance is temporary: HB 2798 requires reducing public assistance grants after four years. We will support economic independence by actively working with clients to assess barriers, develop an agreed-upon self-sufficiency plan, and carry out the plan in a collaborative manner.</i></p>	<ul style="list-style-type: none"> <li>• All non-exempt AFDC clients will be assessed. A family self-sufficiency plan will be developed for all clients.</li> <li>• Welfare clients and DSHS will share responsibility for clients’ moving to economic independence.</li> <li>• Clients will contract with the department to take steps toward economic independence. The department will provide access to resources to ensure clients can reach their goals. The contract will recognize and support incremental progress.</li> <li>• AFDC recipients will receive orientations on employment options, family services, and family planning within 60 days of grant approval.</li> <li>• More intensive case management services will be provided for pregnant and parenting teens.</li> <li>• Actions will be taken to encourage non-custodial parents to pay child support.</li> </ul>
<p><b>4. Prevent Teen Pregnancies and Support School Completion</b></p> <p><i>Reducing the number of teen entrants to the AFDC program and decreasing subsequent pregnancies for teen parents are essential to making a long-term, positive difference.</i></p>	<ul style="list-style-type: none"> <li>• Pregnant and parenting teens will receive intensive case management services to support family functionality and decrease subsequent pregnancies.</li> <li>• High school/GED will be mandated for those young parents who have not completed high school.</li> </ul>

The business vision . . .	and what it means
<p><b>5. Strengthen the Agency's Focus on Economic Independence</b></p> <p><i>Fulfilling our mandate and mission within an environment of limited resources means we must make fundamental changes in how we do business. We must restructure the service delivery process to place greater emphasis on achieving economic independence, replace inefficient ways of doing business to free up staff time, and redirect resources to activities that provide the most help and support for family economic independence.</i></p>	<ul style="list-style-type: none"> <li>• While DSHS will continue to maintain a safety net of limited-term benefits, the focus of welfare services will shift to client independence through employment.</li> <li>• The definition of "welfare services" will be expanded to include employment and social services needed to reach economic independence.</li> <li>• Staff will be trained to focus on self-sufficiency and economic independence.</li> <li>• Services will be targeted to ensure the best use of limited state resources.</li> <li>• Linkages to social services, child support, and other assistance programs will be strengthened. Workers will have access to accurate information about available resources and providers, and will be able to provide better information and referral services to all CSO visitors.</li> <li>• Application time will be reduced. Employment assessment will be automated, as will applications for child care.</li> <li>• Management will have the ability to extract detailed information about caseloads.</li> <li>• Workers will have the flexibility to share client information with other agencies (within the extent of the law) as necessary to carry out each independence plan.</li> </ul>
<p><b>6. Get the Right Benefits to the Right People, Quickly</b></p>	<ul style="list-style-type: none"> <li>• Electronic tools will be used to transfer benefits to clients.</li> <li>• Increased emphasis will be placed on identity verification, fraud deterrence, and fraud detection methods.</li> <li>• People with special needs will be assisted.</li> </ul>

## THE TECHNOLOGY VISION

The Legislature's rationale for transitioning ACES to a more flexible and open environment was reaffirmed by the Work Group through its five months of intensive work. Through this work, the Work Group developed a vision of future welfare technology. Several important goals were identified for the future technology model:

- Utilize more modern technologies for future development.
- Support sharing of information between DSHS programs, providers, and clients through enhanced network architectures, encapsulation of existing systems, and development of common data definitions and exchange formats.

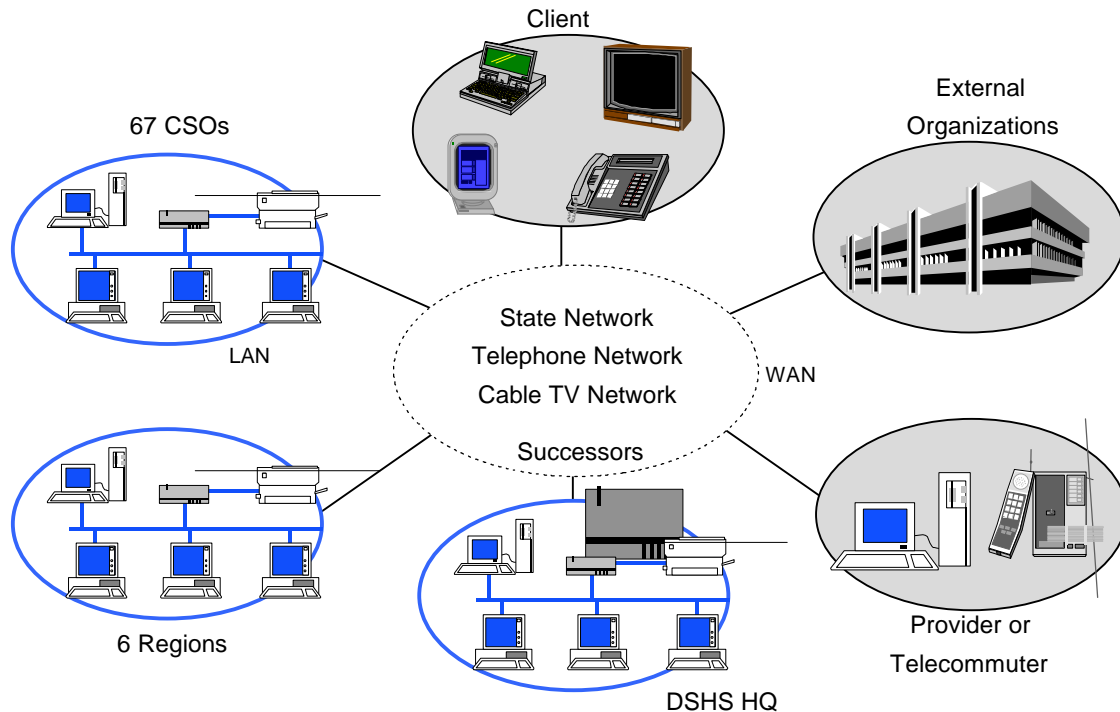
- Support development of future system features by end users.
- Piggyback off other state technology efforts.
- Purchase and integrate package components wherever possible.
- Evolve the legacy systems rather than rebuild them from the ground up.
- Integrate legacy and new systems under a common software architecture.
- Preserve the investment in existing systems to the greatest extent possible.

The budget proviso to ESSB 6244 uses the terms “open” and “flexible” to characterize the future computer environment. These terms proved useful in crafting the future technology model, since they distinguish the more adaptive systems of the future from the legacy systems of the past. The following table presents the model and describes the implications for future welfare systems.

The technology model . . .	and what it means
<b>1. Open computer system</b>	<ul style="list-style-type: none"> <li>• Compliance with industry norms and directions</li> <li>• As non-proprietary a system as possible</li> <li>• Ability to seamlessly cross hardware and software boundaries</li> <li>• Platform independence for data and processing</li> <li>• Plug-and-play components</li> <li>• Reusable data and processing</li> <li>• Portable applications and data</li> </ul>
<b>2. Flexible architecture</b>	<ul style="list-style-type: none"> <li>• Support for migration to emerging norms and standards</li> <li>• Easy accessibility for community providers and clients</li> <li>• Adaptive security</li> <li>• Scalability of applications, hardware, and software</li> <li>• Accommodation to rapidly changing policy and procedures</li> <li>• “User friendly” character</li> <li>• Customizable interfaces</li> <li>• Adaptive technology accommodating physical and cultural differences</li> <li>• Easy access to data and reporting tools</li> <li>• Dynamic allocation of resources</li> </ul>

Within the future architecture, processing will be performed by specialized components (servers for requesters (clients), as shown in the figure below:

### Future Technology Model



In this graphic, shaded ovals indicate entities outside DSHS. Under the future architecture, each of the user groups depicted in the figure will be able to access and share information through the state network, through the public telephone network, and perhaps through the cable TV network. For example:

- Each of the sixty-seven CSOs will have access to automated processes and data through PC workstations connected by local area networks at the CSO. These in turn can be linked to each other and to other user groups via the wide area network. A standard graphical user interface will allow each CSO user to access eligibility and payment information, as well as service planning, employment, and outcome measures information for both clients and service providers.
- Each of the six regions will have access to information kept within that region as well as to centralized information (for example, determination of eligibility) to support their needs. This architecture will put data and processing on whatever platform is most appropriate for the intended use-- local data and processes on local servers and workstations, and central, department-wide, or program-wide data on centrally-located servers and workstations.

- DSHS headquarters will access information from a variety of sources through standard reports as well as through flexible ad hoc reporting tools. These tools will also be available to CSOs and will use data originating from a variety of sources.
- Providers and telecommuters (for example, caseworkers in the field) can access various system services utilizing a variety of remote workstations and portable computing devices.
- Selected external agencies will be able to access and provide information to the department by telephone network dial-up or other wide area network links. Employers, community and technical colleges, and other state and local agencies may be valuable information-sharing partners.
- Clients will also become direct users under the new architecture. They will be able to access, and eventually add and update, information maintained on the department's systems using publicly available remote workstations, kiosks, and telephone voice response capabilities. Additionally, benefits will be issued electronically to customers.

Services provided to an end user by a business application may be provided by many server platforms, each specializing in a certain service. For example, separate servers might exist for eligibility calculation, information retrieval, and report generation. This capability will permit processing to be distributed to the most efficient server components. It will also permit existing systems to be utilized as servers. Thus, systems that provide currently needed features can be incorporated into the architecture, thereby minimizing the number of applications that have to be rewritten.

## WORKING TOGETHER

The following examples convey some of the advantages offered when the business and technology visions are combined into a single model for the future:

Advantage . . .	of technology and business working together
<i>Increased time for direct client service through paperwork reduction</i>	A substantial portion of a caseworker's time is currently spent on nonproductive paperwork or duplicate data retrieval and entry. The future welfare business will require greater client contact with the worker. Utilizing technology to reduce paperwork or duplicate data entry makes more time available for direct contact with the client.

Advantage . . .	of technology and business working together
<i>More informative staff</i>	<p>Many other systems have information that will be valuable to the caseworker in supporting client self-sufficiency. Some of this information resides within DSHS, some within other state and local agencies, and some with private sector providers. The future system could make this information available to caseworkers, enabling them to be more informative to their clients.</p>
<i>Coordinated service delivery</i>	<p>Increased community involvement in providing services will require more coordinated delivery of these services. The future system will contain a task record that will enable providers and case managers to assure that appropriate and effective services are being delivered to clients.</p>
<i>Rapid response to changing policy</i>	<p>Systems developed using traditional methods and technologies are often impediments to needed business change. In contrast, systems developed using more modern methods and technologies can readily accommodate changes in business conditions. This will be increasingly important as national and state welfare reform initiatives materialize and a rapid information systems response comes to be expected.</p>
<i>Improved performance management</i>	<p>Ensuring case- and program-level performance will be much more important in the future welfare environment. Improved access to information will be necessary to assess performance measures. Access to needed information will be simpler and much quicker under the new system, with its proven “user friendly” inquiry capabilities.</p>
<i>Less end user training</i>	<p>Most systems currently in operation have unique look-and-feel characteristics, from the basic log-on sequence to the basic use of each application. This non-standardization generally necessitates a substantial training investment for each new system user to learn the peculiarities of each different system. The new environment should have common look-and-feel characteristics, dramatically reducing the initial training costs and “time-to-service” for new end users.</p>



Advantage . . .	of technology and business working together
<i>Self-reliant clients, providers, and telecommuters</i>	<p>Both clients and providers will be encouraged to become increasingly self-reliant in the future. Direct access to the agency's information will support self-reliance. For example, clients could enter information directly into the system and access status information themselves, contracted providers could file client progress reports directly into the system, and telecommuters could access basic system features and functions from different locations. The future system will simplify entry of and access to appropriate information by a more diverse audience from a much wider range of locations.</p>
<i>Reduced systems costs</i>	<p>Future social services systems will be increasingly viewed from a common perspective and become more integrated. Capabilities and data that exist in one system (for example, JOBS) will be reused in other systems (for example, ACES), providing significant savings during both the initial development and subsequent enhancements. Additionally, ongoing operating costs should be reduced as end users become increasingly self-sufficient. Moreover, as systems components become integrated, the time required to consider a policy change will be dramatically reduced, providing additional labor cost savings.</p>

## ACTION PLAN

The action plan presented in this section combines DSHS' business vision with the future technology model in a single, integrated approach for the transition of ACES.

The transition from an environment focused primarily on eligibility determination and benefits payment to one focused primarily on economic self-sufficiency will be a significant challenge. In addition, national welfare reform initiatives are still emerging, and the future impact is still unclear. Such challenges underscore the importance of *preparing now* for an uncertain future.

ACES (the Connecticut system) will be transferred and implemented throughout the state during the 1995–1997 biennium. Preparation for transitioning ACES to the more open and flexible environment will be occurring during this period as well. Once ACES has been implemented and is considered stable, the actual transition will occur. The new architecture will be in place by the end of the 1999–2001 biennium.

Presented below is a five-point action plan to transition ACES to the future model described in the preceding section. Each of the five key interdependent tasks will produce tangible and measurable milestones.

1. **Model Business Policy** - Will develop a model of Economic Services' processes and data so that the impact of policy change on its information systems can be quickly assessed. The end-product of this effort will be a high-level business policy model. It will also include a prototype applying sample policy changes to the model.
2. **Establish Development and Architectural Guidelines** - Will establish practical guidelines and standards for procuring, developing, managing, and supporting products and services that follow the state's future technology model. The end-product will be a baseline set of guidelines related to future systems projects.
3. **Provide Common Data Access** - Will build a warehouse of data, from both internal and external sources, and provide reporting tools to rapidly access information needed to support clients' self-sufficiency. The end-product will be a common data warehouse pilot application.
4. **Transition ACES Functionality** - Will reengineer the ACES design into modular software components and transition it to the future technology architecture, following a rational sequence of steps. The end-product will be a transition specification emphasizing a phased, incremental approach in making the actual transition during the subsequent two biennia (1997–99 and 1999–2001).

5. **Develop Client/Provider Services Management Capability** Will support service planning, assessment, monitoring, and measurement of outcomes. Will integrate employment information and monitoring with assessment of various service providers to support self-sufficiency counseling. The end-product of this effort will be a client services management system specification and prototype.

## **MODEL BUSINESS POLICY**

Traditional approaches to building information systems have placed too little emphasis on understanding the business. To build more responsive systems, a view is needed that can quickly and understandably reveal the impact of a policy change.

As a blueprint provides a common reference for both the real estate customer and the general contractor, so a business model provides a common reference for both the information systems customer and the analyst/engineer. Change in customer preference can be quickly assessed by the general contractor, based on the blueprint, and adaptations made more quickly in the building. Similarly, change in business policy can be quickly assessed by the analyst/engineer, based on the business model, and adaptations made more quickly in the system.

This task will model Economic Services' core business data and processes so that the business can be understood. The integrity of the business model will be tested and its value verified. This will be accomplished by applying sample policy changes to the model to determine how quickly their impact on the information system can be assessed, and how rapidly changes could be made to the system.

This milestone is particularly important for two reasons. First, it will ensure that the future technology architecture will indeed fit the business needs. Second, it will ensure that future changes in policy can be quickly assessed and adaptations rapidly made. It is worth noting that the model and skills built in completing this task will provide a valuable foundation for agency-wide information integration and for information sharing with private sector partners.

The tasks to *Establish Development and Architectural Guidelines* and *Transition ACES Functionality* rely on the business perspective and analytical skills gained in this task. This milestone will be achieved by the middle of the 1995–1997 biennium.

## **ESTABLISH DEVELOPMENT AND ARCHITECTURAL GUIDELINES**

This task will establish practical standards and guidelines for systems that will follow the future technology model. It also includes technical training on standards and guidelines.

The general contractor understands what materials and structural characteristics should be applied to the customer's model but also considers the customer's ability to use and maintain the building's facilities. If practical guidelines are available, these choices can be made relatively quickly, without using the customer's new building as a proving ground for all the different materials.

Similarly, the information systems manager knows what technologies and architectural characteristics should be applied to the business model, but when making recommendations, also notes the customer's ability to use and maintain the system. Guidelines will be needed to select the proper technologies in the future model. Standards will be needed to design the future architecture with the maximum flexibility and openness to accommodate changing business conditions in the future. These guidelines will span hardware, software, and network products as well as specialized professional services associated with the agency's future technology model.

The tasks to *Transition ACES Functionality*, *Provide Common Data Access*, and *Develop Client/Provider Services Management Capability* rely on the standards and skills developed in completing this task. A working set of standards will be completed by the end of the 1995–1997 biennium. Once the baseline standards and guidelines have been developed, they will be augmented throughout the ACES transition. As new technologies emerge and additional experience is gained, the related standards and guidelines should be updated so that the state does not institutionalize dated technologies or onerous practices.

It should be noted that the standards established in this task are not unique to ACES; they are specific to the future technology model. Therefore, they will be valuable to any systems development, enhancement, or maintenance effort that follows the agency's future technology model.

## **PROVIDE COMMON DATA ACCESS**

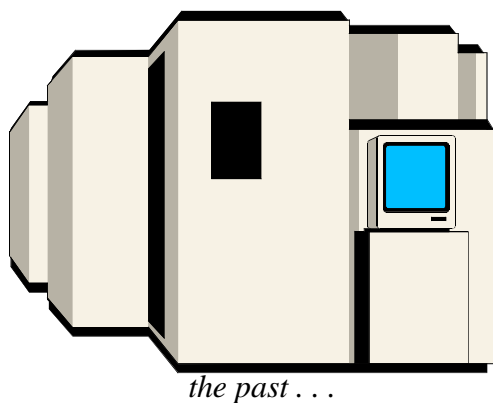
One of the most frequently cited limitations in changing a business to meet emerging customer needs is difficulty in obtaining needed information. The information that has been needed to support eligibility determination and benefits payment in the past will not be sufficient to support self-sufficiency in the future.

This task addresses both *availability* of needed information and *access* to that information in an intuitive and timely manner. A “data warehouse” will be created, utilizing a relational database on a server platform. Core ad hoc reporting capabilities will be established early in this task. Access to a number of selected data sources, both internal and external to the agency, will be provided, effectively broadening the database available for ad hoc reporting. As the core technologies and related skills are developed, additional capabilities will be added to access and share information with other departments, agencies, and business partners.

The task to *Develop Client/Provider Services Management* is particularly dependent on the data and skills gained in completing this task. A working baseline will be completed by the end of the 1995–1997 biennium. Once the basic data warehouse has been proven, it will be augmented throughout the ACES transition. It should be noted that the data warehouse established in this task will contain data that are often needed by other human services programs. Therefore, this milestone can help the agency in its efforts to become an integrated human services system in the future.

## TRANSITION ACES FUNCTIONALITY

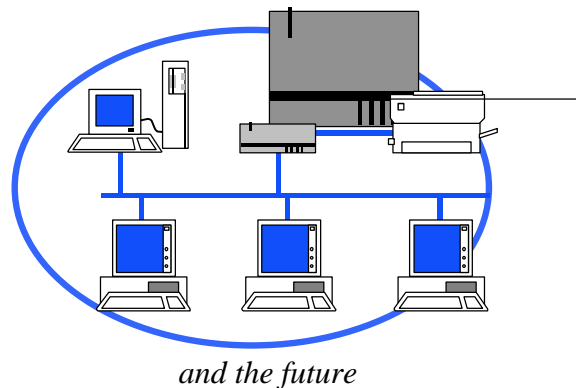
The Legislature affirmed the need to transition ACES to a more open and flexible environment, so that ACES would not be a constraint on changing policy in the future. This task will separate the existing ACES design into modular software components, so that its current functionality can be transitioned to the future model.



Transition of the functional components will be scheduled to complete the transition as rapidly as possible without disrupting ongoing ACES operations. A tangible working prototype will be developed to validate the approach before the actual transition occurs.

ACES will continue to operate as is during the 1995–1997 biennium. Activities during this period are intended only to prove the future concept before committing substantial funding to the actual transition.

The transition specification and prototype will be completed during this period. Much more accurate cost estimates for the full transition will also become available within this biennium. The transition will occur over the subsequent two biennia, with the full transition completed approximately six years from now.



## DEVELOP CLIENT/PROVIDER SERVICES MANAGEMENT CAPABILITY

A client/provider services management system is needed to support case planning, assessment, and measurement of outcomes to keep pace with the shift in welfare emphasis to self-sufficiency. This task will lay the groundwork for the subsequent development or acquisition of this capability by developing a working prototype of what the state wants. The experience of prototyping this capability will confirm prototyping and development capabilities under the future technology model. Prototyping this capability will test the future model in an area of real business need, before fully committing ACES to this model.

This task will provide an assessment of existing case management systems, to determine if a working baseline can be acquired rather than built. An incremental approach is emphasized in this task as with all others. This includes early prototyping for tangible demonstration of concepts and concrete evidence of feasibility before a future investment is requested.

This task will occur fully during the 1995–1997 biennium. Subsequent efforts to purchase or develop this capability will be accomplished outside the ACES transition project.

## TRANSITION TIME LINE

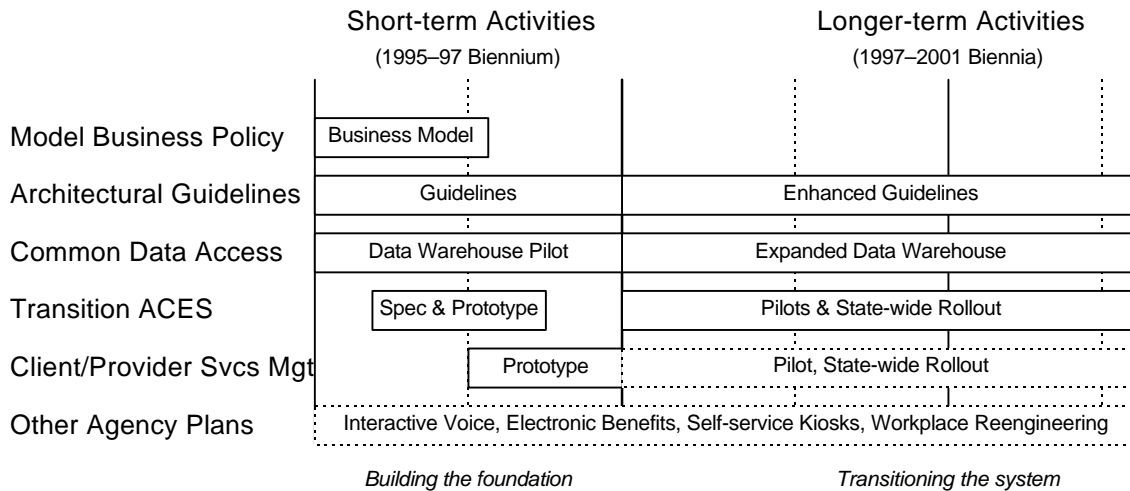
The Legislature confirmed that an incremental approach to the transition was preferred over the “all or nothing” approach that has been so costly in the past. An incremental approach yields tangible results earlier and manages project risk better. Therefore, the transition of ACES to the new architectural model will occur in two phases:

- **Phase 1: 1995–97 Biennium** - The primary intent of this phase is to test the open and flexible future architecture and build a foundation for the substantial investment to complete the transition.
- **Phase 2: 1997–99 and 1999–2001 Biennia** - The primary focus of this phase is the actual transition of ACES to the new environment.

The chart on the following page reflects the schedule for the five key transition tasks. The tasks enclosed in dotted lines fall outside the scope of the ACES transition project but should be coordinated as department-wide efforts.

As the chart indicates, the five tasks follow an incremental approach. The entire five-point plan spans three biennia, beginning with the 1995–1997 biennium. To meet this schedule, work on the short-term milestones must begin immediately. The short-term activities will produce tangible and measurable results, by which the future work effort and funding level can be estimated. Some of the foundation pieces will be available by the end of FY96, and all will be available by the end of FY97. The improved system will be available state-wide by the end of FY01.

## Milestones in the ACES Transition



## OTHER ENHANCEMENT PROJECTS

In addition to the ACES transition, DSHS is planning other technology enhancements that will also support welfare reform. Examples include:

- *Electronic benefits transfer* to expedite distribution and control of benefits.
- *Interactive voice response* to permit people to access information from their homes and other more convenient locations.
- The Department of Information Services recently began installing *self-service kiosks* throughout the state. These kiosks could make possible direct entry of information to the system and direct access to benefits status and employment and provider information.

Because these enhancements are being addressed elsewhere, they have not been brought within the scope of the ACES transition. However the transition will be coordinated with these and other automation projects to ensure movement toward an integrated and responsive information environment.

## COSTS AND BENEFITS

This section addresses the costs and benefits of transitioning ACES to an open and flexible environment. The estimated costs for the transition include state program and technical resources, and contract resources for development and independent oversight roles.

### PHASE 1: ESTIMATED 1995–1997 BIENNIUM COST TOTALS

The following chart shows estimated costs for the first biennium of the ACES transition project.

Task	Task Cost	FY 1996	FY 1997
Model Business Policy	\$326,278	\$326,278	\$0
Architectural Guidelines	255,898	157,949	97,949
Common Data Access	262,336	211,752	50,584
Transition ACES Functionality	1,885,004	585,801	1,299,203
Client/Provider Svcs Mgt	307,732	0	307,732
Total 1995–97 Biennium	\$3,037,248	\$1,281,780	\$1,755,468

The investment in the 1995–1997 biennium (Phase 1) will provide the following tangible results.

- A baseline model of Economic Services’ core business processes and data. This will begin to provide a common reference for the customer and builder to use when making changes to the system in the future.
- A foundation set of guidelines for using more modern development methods, and standards for building more flexible architectures.
- An initial data warehouse, with sample ad hoc reporting capabilities.
- A detailed transition approach, validated with working prototypes.
- A working prototype of client/provider services management capability. This will clarify the functional scope and the look-and-feel expectations, and will be suitable for procurement of contract resources.



## PHASE 2: ESTIMATED 1997–2001 BIENNIA COST TOTALS

The chart below shows estimated costs for the subsequent two biennia of the ACES transition project.

Task	Low Estimate	High Estimate
Architectural Guidelines	\$300,000	\$300,000
Common Data Access	500,000	2,200,000
Transition ACES Functionality	10,000,000	20,000,000

Total 1997–2001 Biennia                      \$10,800,000 to \$22,500,000

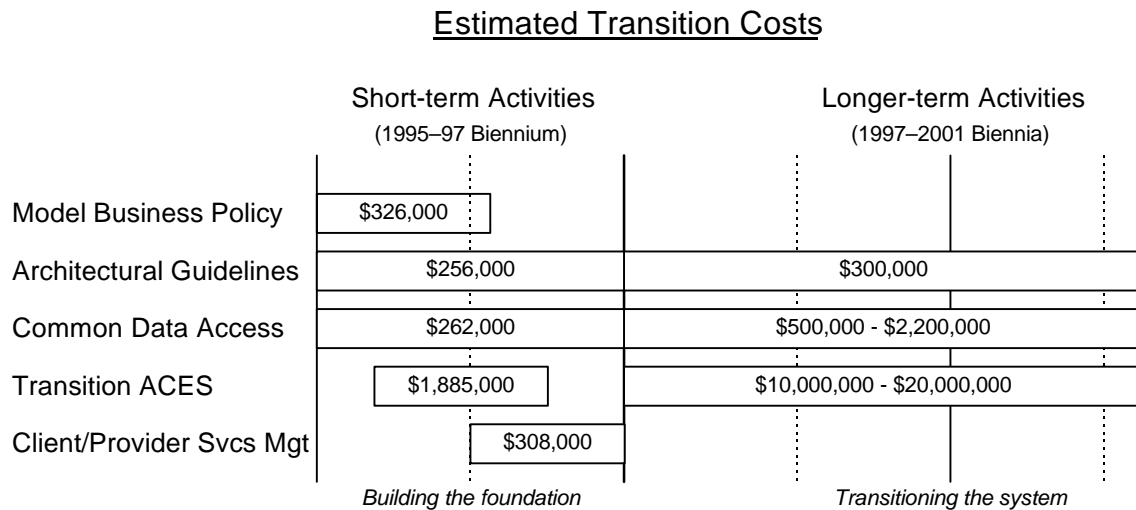
The investment during the second and third biennia (Phase 2) will provide the following tangible results:

- Enriched guidelines for development, maintenance, or enhancement of systems following the future technology model. The guidelines produced during this phase should be valuable for any system in the move toward a more open and flexible environment.
- A more robust repository of data from a wider range of sources. This will enable a much better response to changing business conditions and support a much higher degree of integration.
- A completed ACES transition, according to the plan developed in Phase 1.

Note that costs for work on the tasks to *Model Business Policy* and *Develop Client/Provider Services Management Capabilities* have not been included in the 1997–2001 biennia estimates. These tasks will revert to agency responsibility, outside the ACES transition.

The cost estimates for the second phase represent only “order of magnitude” estimates. The activities in the first phase will provide much more knowledge of the investment required in the second phase. Additionally, ACES will be implemented during the first phase, providing a more accurate assessment of the effort required to transition it to a more open and flexible architecture. Therefore, more accurate cost estimates are to be provided toward the end of the first phase, based on additional knowledge gained.

Estimated overall costs for both phases are illustrated in the chart below.



## EXPECTED BENEFITS

The transition will move ACES to a more open and flexible computer system. It will also set in motion a technology vision that is reflected in DSHS' Information Technology Plan. It will provide methods and skill sets needed throughout the department, indeed throughout the state, in other technology implementations.

The state can expect a number of specific benefits once the ACES transition has occurred. For example:

- **Rapid Response to a Changing Environment** -The transition plan moves the agency to an architecture that can be expanded and enhanced incrementally, quickly, and cost-effectively. This avoids many of the barriers and long lead times commonly associated with traditional legacy architectures. Processing power, databases, applications, and network components can be added and deployed where and when they are needed, with minimal disruption to the technical infrastructure.

The transition plan is designed to shift the agency's technical infrastructure and skill base to take advantage of modern, rapid development tools and techniques, such as prototyping, CASE, and object-oriented tools and techniques. These technical methods will be supported by data and business process models, which will greatly facilitate the identification of impacts resulting from policy changes.

The transition plan will open up the agency's systems and networks to facilitate access to a much broader range of information. Users will be able to access data from a variety of sources in a standardized, friendly way. This capability will be crucial in supporting the move toward self-sufficiency, since access to extensive client and provider information will be necessary.

- **Reduced Caseload Growth** - Each year, federal and state programs deliver almost \$500 billion in cash benefits and food assistance (“Creating a Benefit Delivery System That Works Better & Costs Less,” Report of the Federal Electronic Benefits Transfer Task Force; Washington DC, May 1994). In the State of Washington, annual grant payments exceed \$550 million, and medical assistance payments (primarily to welfare clients) exceed \$1.4 billion. Moreover, grant payments are projected to ~~increase~~ by \$108 million next biennium. In the same period, medical assistance payments are projected to grow by \$330 million.

A key national strategy for reducing this growth in welfare-related payments is to help clients become economically self-sufficient, viewing welfare reciprocity as a transitional period of preparation for self-sufficiency rather than as a way of life.

With the assistance of a more flexible information system and access to a broader range of information, caseworkers can concentrate more of their time on providing self-sufficiency counseling and assistance. This, in turn, should reduce the rate of welfare-related benefits payment and case load growth.

- **Reduced Costs** - The cost of traditionally built legacy systems is high. The initial investment is high, and the cost of maintenance grows disproportionately with demand. In contrast, the cost of more modern systems is comparatively low. The initial investment may be moderate to high, but the cost of maintenance is substantially lower in proportion to demand. As the agency moves to the future technology model, the cost required to respond to future changes can be reduced significantly.
- **Improved Effectiveness and Efficiency** -The ability of management and staff to spend their time on the most important work becomes more critical as the focus on self-sufficiency demands increasing amounts of their time. The transition of ACES to the future technical model will foster both effectiveness and efficiency. Specifically, the new technical model will allow better response to unplanned information needs by providing easier and more flexible access to data in a wider variety of formats. Program evaluation and client outcome data will be readily available, and client data among various business functions will be more accessible, allowing workers to spend less time auditing manual files.
- **Improved Client Service** - Improved service to the client is not a new goal; however, the transition of ACES to a more modern architecture could significantly aid in achieving this goal. Lobby congestion and wait times will be reduced by allowing clients to access automated information directly through kiosks, remote workstations, and telephones using voice recognition and processing technology. Workers will have access to a much broader set of information to help clients find employment and training. The return visits required of clients can be reduced because of automated follow-up and maintenance procedures.

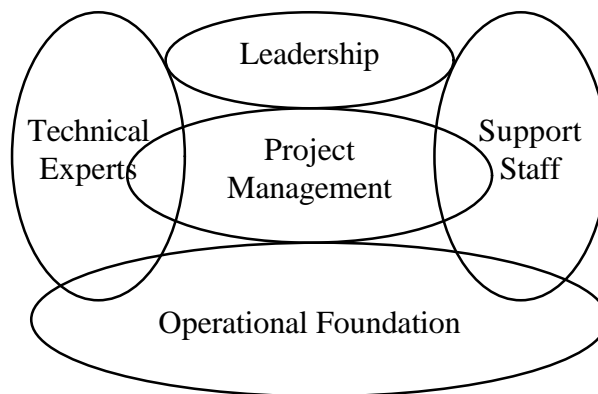
# TRANSITION MANAGEMENT

This section focuses on effective management as a key to the success of the ACES transition. Without the proper management infrastructure in place, project risks cannot be effectively managed and the transition plan cannot be successfully implemented. It is worth noting that the guidelines discussed below, while important to the ACES project, are not peculiar to the project.

## MANAGEMENT INFRASTRUCTURE

Management infrastructure in this context refers not only to the composition and structure of the project necessary to successfully implement the transition plan, but also to the issues of sponsorship, level of participation, and communication required. The following guidelines provide a useful perspective on crafting the initial project organization or making incremental changes to the organization.

- A first ingredient in the management infrastructure **properly qualified personnel, in a rational project organization** The following organizational paradigm has worked well in constructing a project organization and adapting it to changing conditions that occur throughout the life of any technology project.



Within this organizational paradigm, most technology projects involve several major players.

- ✓ *Steering Committee* - The steering committee has key oversight responsibility and ultimate authority over the project. Although independent of the project in that they do not perform day-to-day tasks on it, they are responsible for ensuring project success by providing referent and direct authority for the project. The committee should comprise senior-level individuals in positions to make decisions and implement related policy, budget, staffing, or other project concerns. The committee

should be chaired by senior management from the part of the organization that will have the greatest impact as a result of automation. Steering committee members for the ACES Transition Plan should include, at a minimum, senior representatives from the DSHS Secretary's Office, Economic Services, and the Department of Information Services.

- ✓ *Champions* - The champions are individuals or groups (potentially other agencies, departments, or even private sector resources) that support the technology initiative. These individuals are most useful in providing external support to the project for the steering committee and publicity across a wide spectrum of interested parties. Although not formally convened, the champions represent a significant resource to the project in ensuring adequate sponsorship.
- ✓ *Project Director* - Each project should have a single point of responsibility for its day-to-day operations. This individual should have competencies in technology project management and personnel management, familiarity with the technology being implemented, and a thorough understanding of the project and project team. Generally, past success in similar projects is the best predictor of future managerial success. In the case of ACES transition, experience in bringing new technologies to state agencies would be particularly important.
- ✓ *Independent Oversight and Internal Quality Assurance* -Although scrutiny by the steering committee and project manager is critical, oversight by a completely neutral third party with expertise in the management and technical approaches can help assure project success. This role can often detect both management and technical issues missed by others who are too engrossed with daily activities to see the larger picture.

The focus of the neutral third party should be on quantitative measurements of performance and success rather than on qualitative assessment of suitability. For example, an independent project monitor can evaluate and report on the work required and the consistency of a specific screen design, as well as the degree to which the design does or does not address specific documented requirements. In contrast, internal quality assurance is better suited to make qualitative judgment about how the look-and-feel of a screen will be accepted by the caseworkers in the CSOs, or whether the navigation among screens is as efficient as it could be in supporting real work patterns.

- ✓ *Vendors* - Vendors can be the best way to rapidly get the expertise needed to implement new technologies. They can:
  - provide expertise that does not exist internally;
  - provide expertise that does exist internally, but cannot be made sufficiently available to the project;
  - provide independent and objective thought; and

- provide an alternative to permanently increasing internal agency staff count.

- ✓ *State Technical Representation* - It will be critical to have state technical staff involved throughout the transition of ACES. Although vendors can be valuable in reducing risk and bringing new knowledge into an enterprise, it will be the state's responsibility in the long term to manage and grow the architecture. Thus, state technical personnel should work in conjunction with vendors wherever feasible to gather as much knowledge about the technology being implemented as possible.

State technical staff will need significant new knowledge if they are to effectively interface and coordinate vendor development and implementation activities utilizing modern tools, techniques, and technologies. There are already staff within DSHS who have developed some of the necessary knowledge and expertise. These individuals should be identified and positioned to facilitate propagation of their knowledge and expertise.

- ✓ *State Program Representation* - As with almost any technology project, success or failure hinges rarely on an esoteric technical consideration but rather on how the project is accepted by those it is meant to benefit. This means end users need to be involved in the transition effort not only for the critical business knowledge they possess but also as ultimate arbiters of what is useful. This type of "buy-in" to the transition initiative is best accomplished by including state program personnel early and often in the project.

- A second ingredient is **unambiguous roles and clear boundaries of responsibility**, within which each player has fair latitude to discharge his/her responsibility in the manner they think best serves the project sponsors.
- **Clear lines of communication** are also important. Both formal and informal relationships need to be fostered, and the communications should reflect these needs. For projects involving a significant number of players, a formal communications plan should be put in place determining how and when each party should be contacted. The communications infrastructure should also include ways for people to raise issues they believe are worthy of management consideration, as well as escalation procedures for particularly high-risk issues. Of particular importance are lines of communication between technical and program staff, and between CSOs and central staff.
- Also required are **measurement and adaptation mechanisms**. The ability to manage a project depends upon management's ability to measure performance objectively, contrast actual performance against needed accomplishments at

different intervals through the project, and quickly make any adjustments that appear to be warranted.

Performance is distinguished from progress here. When measuring progress, people tend to have a retrospective approach: how far have we gotten from the starting line? When measuring performance, they tend to have a prospective approach: how far from the finish line are we? The latter approach is generally less concerned with the amount of time spent on a task than the amount of time that remains to complete the task (and whether the schedule provides the needed time). The latter approach generally is less concerned with the amount of budget spent on the project than the amount of budget that is needed to complete the project (and whether the remaining budget provides the needed funding).

## IMPORTANT CONSIDERATIONS

All projects are different from day-to-day business activities in many ways. Moreover, technology projects are different from typical line-of-business projects in many ways, as seen in the following examples:

- **Timeframe** - Management of day-to-day business processes is continuous, since a business is presumed to be an ongoing concern. In contrast, management of a technology project is periodic, since a project is presumed to go away once completed.
- **Communication** - Management of day-to-day business processes tends to reflect hierarchical communication, using the decision protocol apparent in most businesses. In contrast, management of a technology project tends to encourage informal communication, seeking whatever knowledge is required to get the job done.
- **Authority** - Management of day-to-day business processes tends to rely on formal and direct lines of authority. In contrast, management of a technology project tends to rely on referent and indirect authority.
- **Perspective** - Management of line-of-business projects tends to have a historical perspective, since business projects are often intended to solve pressing problems. In contrast, management of technology projects tends to have a future perspective, since they are often intended to yield opportunity (for example, strengthen service, enhance product quality, or enable more informed business decisions).
- **Skills** - Management of day-to-day business processes tends to depend on complementary skills among team members oriented along functional lines. In contrast, management of a technology project tends to depend on contrasting skills oriented along diverse technical or analytical lines.
- **Impact of Attrition** - Management of day-to-day business processes tends to be less affected by the departure of an individual, since others can typically perform

their duties acceptably. In contrast, management of a technology project tends to be greatly affected, since most project participants have unique skills, are there for a fixed period to perform a specialized task, and delay the work of others by their absence.

Effective management of the ACES transition will require a keen understanding of the unique challenges posed by a technology project.

## TRANSITION CHALLENGES

Any project that depends on the performance of such a diverse group of individuals as those involved in the ACES project has inherent risks. Moreover, departures from the “old tried-and-true” ways of the past may cause people to support change in their conversations but not in their actions. Effective management of any technology project requires a clear understanding of risk. Management of the ACES transition will require particularly astute management of risk, given the problems of past welfare system projects. The following are areas of risks which may be particularly relevant to the ACES transition:

- **“Grand design” approach** - The overall architecture should be developed with a plan and clear guidelines in mind. However, it should not enforce a single pre-conceived design to be followed regardless of technological advancement or political and cultural realities. Modern architectures grow organically; that is, they take advantage of new technical developments as they grow.

The state should avoid a “big bang” architecture where all components are purchased, installed, and turned on in a single project. By piloting pieces of the architecture, rolling it out over time, and evolving it in a rational manner as more advanced technology becomes useful, the state will reduce costs, avoid technological obsolescence, and achieve a better fit of technology to business needs.

- **Investment in new technologies and techniques** - The new technologies and techniques that are needed for a rapid response to policy changes require the state to accept ongoing change as a way of life. For example, the state needs to treat PCs as expenses, since they will likely be upgraded or replaced every few years to exploit the performance and cost advantages gained by maturing technologies. The state should no longer think in terms of a one-time outlay for a major system that is connected via hard-coded interfaces. Instead, the investment should be approached in terms of modular plug-and-play components that are continuously updated and utilized in new ways.

A funding philosophy is needed that better reflects incremental development and evolutionary information systems. The changes outlined in the ACES transition



plan will require five to eight years to implement. It is critical that funding decisions be made and implemented with a longer-term strategic perspective than merely the “next biennium.”

- **Address need for concurrent business change** -Technology is only an enabler of change. Although some savings can result from automating existing processes (for example, eliminating redundant manual data capture), most significant savings result from re-inventing the way business is performed. Removing redundant or unnecessary manual procedures or practices, or revising policy to leverage the efficiencies achievable through modern technology, is considerably more effective than simply grafting modern technology onto cumbersome or outdated business practices.
- **Shared responsibility** - The tendency to place all responsibility for development upon a vendor and then hold the vendor tightly to a contract does not work. Risk is better managed by entering into partnership with a vendor and sharing responsibility for delivery, with clearly defined and well thought-out boundaries of responsibility. Permitting the vendor latitude in performing their work and teaming with the vendor so that decisions are mutual rather than one-sided lead to more cooperative vendors and lowered risk. Coupled with added incentive for early delivery, this is a much more effective means of assuring delivery of high-quality projects on-time and within budget.
- **Implementation guidelines** - The transition to a client/server processing architecture, with both distributed and centralized data, places significant new requirements upon the state. Clear but flexible system implementation guidelines must be defined. They should motivate developers, users, and managers to follow them, not simply because the central authority “says so,” but because of the benefits of doing so.
- **Use the right people** - The skills required to implement and manage these new technical environments are unlike the skills generally possessed by people involved with traditional legacy systems. Using staff with experience in specific technologies, coupled with vendor “mentors,” will significantly improve the probability of success. In addition, it will be critically important to provide existing staff with training and exposure to the new technologies.
- **Leadership strength** - The sponsors and steering committee members for a project are critical throughout the life of a project. Too often in technology projects senior management tends to relax their involvement or inquisitiveness when a project is progressing satisfactorily. This often leads to projects failing when they were thought to be within reach of success. Project sponsors should insist on senior management’s involvement-- and senior management should insist on being involved.
- **Prepare stakeholders** - There is one sure way to guarantee the failure of a technology project: do not prepare the people who are involved in the project for

the outcome. Investment in technology is wasted unless it is accompanied by a significant investment in educating technical, end user, and management staff alike in the development, use, and support of the technology. Without a willingness to make this investment in people, the investment in technology will be wasted.

- **Anticipate impact on end users** - Technology projects are designed to make business activities easier for end users. However, “techies” are often not the best judges of what is easier. The impacts of technology on end users must be anticipated and prepared for. The best (and only) way to do this is to significantly involve those who will live with the outcome of the project-- the end users.
- **Scope creep** - By design, this project will develop new skills, reveal many opportunities for improvement, and generally foster enthusiasm. However, this enthusiasm typically makes people want more than originally planned. This project is designed to produce *essential results, in manageable increments*; it does not contain a reserve for enhancements beyond the original scope.

## **CONCLUSIONS AND RECOMMENDATIONS**

The Work Group's intense efforts during the five-month period of developing this plan reaffirm the Legislature's rationale for transitioning ACES to a more flexible and open architecture.

National and state welfare reform initiatives will cause welfare policies and programs to change dramatically in the future. Today's business environment focuses on eligibility determination and benefit payment rather than on self-sufficiency. This focus will change.

The current ACES technical environment (the Connecticut transfer system) is designed primarily to support eligibility determination and benefit payment. Although these capabilities will remain important, they will not address self-sufficiency initiatives. In addition, ACES is not architected to sustain the high rate of change expected during the latter part of this century and the next century.

### **WORK GROUP RECOMMENDATIONS**

- ✓ The Work Group recommends the transition plan presented in this report as well as funding for the 1995–1997 biennium be approved.
- ✓ The Work Group recommends a strong management infrastructure be established to ensure the success of the transition. A detailed project plan for each of the five transition tasks described in this report should be prepared and then be approved by the management structure.
- ✓ The Work Group recommends continued participation from the private sector and other public sector agencies as work gets underway to implement this plan.